

1. An apparatus for increased data throughput of digital media recorders, the apparatus comprising:
  - a control module configured to distribute a source data stream to a plurality of compression paths;
  - the plurality of compression paths configured to compress and buffer digital data to provide a plurality of compressed data streams;
  - at least one media encoder configured to concurrently encode the plurality of compressed data streams on a plurality of media tracks; and
  - the control module further configured to initiate insertion of metadata within the compressed data streams, the metadata configured to facilitate reconstruction of the source data stream from the compressed data streams.
2. The apparatus of claim 1, wherein the at least one media encoder is further configured to encode an active path identifier at an access point within the plurality of media tracks.
3. The apparatus of claim 1, wherein the metadata comprises a swap command indicating selection of another compression path.
4. The apparatus of claim 1, wherein the control module is further configured to monitor available buffer space within each compression path.
5. The apparatus of claim 1, wherein the control module is further configured to distribute data to a selected compression path based on available buffer space within each compression path of the plurality of compression paths.

6. The apparatus of claim 1, wherein the control unit is further configured to adjust distribution of the source data stream in response to media defects on particular media tracks.

7. The apparatus of claim 1, wherein each compression path of the plurality of compression paths comprises a compression module configured to compress data and a buffer configured to buffer data.

8. An apparatus for increased data throughput of digital media recorders, the apparatus comprising:

at least one media decoder configured to concurrently decode a plurality of media tracks to provide a plurality of compressed data streams;

a plurality of decompression paths configured to concurrently decompress and buffer the plurality of compressed data streams to provide a plurality of decompressed data streams; and

a control module configured to merge the plurality of decompressed data streams into a merged data stream as directed by metadata contained within the plurality of compressed data streams.

9. The apparatus of claim 8, wherein the at least one media decoder is further configured to decode an active path identifier at an access point within the plurality of media tracks.

10. The apparatus of claim 8, wherein the metadata comprises a swap command indicating selection of another decompression path.

11. The apparatus of claim 8, wherein each decompression path of the plurality of decompression paths comprises a decompression module configured to decompress data and a buffer configured to buffer data.

12. A method for increased data throughput on digital media recorders, the apparatus comprising:

distributing a source data stream to a plurality of compression paths to concurrently provide a plurality of compressed data streams;

inserting metadata within the compressed data streams, the metadata configured to facilitate reconstruction of the source data stream from the compressed data streams; and

concurrently encoding the plurality of compressed data streams on a plurality of media tracks.

13. The method of claim 12, further comprising monitoring available buffer space within each compression path.

14. The method of claim 12, wherein distributing the source data stream is based on available buffer space within each compression path.

15. The method of claim 12, further comprising adjusting distribution of the source data stream in response to media defects on particular media tracks.

16. A method for increased data throughput of digital media recorders, the method comprising:

- concurrently decoding a plurality of media tracks to provide a plurality of compressed data streams;
- concurrently decompressing the plurality of compressed data streams to provide a plurality of decompressed data streams; and
- merging the plurality of decompressed data streams into a merged data stream as directed by metadata contained within the plurality of compressed data streams.

17. An apparatus for increased data throughput on digital media recorders, the apparatus comprising:

- means for distributing a source data stream to a plurality of compression paths to concurrently provide a plurality of compressed data streams;
- means for inserting metadata within the compressed data streams, the metadata configured to facilitate reconstruction of the source data stream from the compressed data streams; and
- means for concurrently encoding the plurality of compressed data streams on a plurality of media tracks.

18. An apparatus for increased data throughput on digital media recorders, the apparatus comprising:

- means for concurrently decoding a plurality of media tracks to provide a plurality of compressed data streams;
- means for concurrently decompressing the plurality of compressed data streams to provide a plurality of decompressed data streams;
- means for merging the plurality of decompressed data streams into a merged data stream as directed by metadata contained within the plurality of compressed data streams.

19. A computer readable storage medium comprising computer readable program code for increased data throughput of digital media recorders, the program code configured to conduct a method comprising:

distributing a source data stream to a plurality of compression paths to provide a plurality of compressed data streams;

concurrently encoding the plurality of compressed data streams on a plurality of media tracks; and

inserting metadata within the compressed data streams, the metadata configured to facilitate reconstruction of the source data stream from the compressed data streams.

20. The computer readable storage medium of claim 19, wherein the method further comprises monitoring available buffer space within each compression path.

21. The computer readable storage medium of claim 19, wherein distributing the source data stream is based on available buffer space within each compression path.

22. The computer readable storage medium of claim 19, wherein the method further comprises adjusting distribution of the source data stream in response to media defects on particular media tracks.

23. A computer readable storage medium comprising computer readable program code for increased data throughput of digital media recorders, the program code configured to conduct a method comprising:

- concurrently decoding a plurality of media tracks to provide a plurality of compressed data streams;
- decompressing the plurality of compressed data streams to provide a plurality of decompressed data streams; and
- merging the plurality of decompressed data streams into a merged data stream as directed by metadata contained within the plurality of compressed data streams.

24. A system for increased data throughput of digital media recorders, the apparatus comprising:

- a control module configured to distribute a source data stream to a plurality of compression paths;
- the plurality of compression paths configured to compress and buffer digital data to provide a plurality of compressed data streams;
- at least one media encoder configured to concurrently encode the plurality of compressed data streams on a plurality of media tracks;
- the control module further configured to initiate insertion of metadata within the compressed data streams, the metadata configured to facilitate reconstruction of the source data stream from the compressed data streams;
- at least one media decoder configured to concurrently decode a plurality of media tracks to provide a plurality of compressed data streams;
- a plurality of decompression paths configured to concurrently decompress and buffer the plurality of compressed data streams to provide a plurality of decompressed data streams; and

the control module configured to merge the plurality of decompressed data streams into a merged data stream as directed by metadata contained within the plurality of compressed data streams.

25. The system of claim 24, wherein the at least one media encoder is further configured to encode an active path identifier at an access point within the plurality of media tracks.

26. The system of claim 24, wherein the metadata comprises a swap command indicating selection of another compression path.

27. The system of claim 24, wherein the control module is further configured to monitor available buffer space within each compression path.

28. The system of claim 24, wherein the control unit is further configured to adjust distribution of the source data stream in response to media defects on particular media tracks.

29. The system of claim 24, wherein the at least one media decoder is further configured to decode an active path identifier at an access point within the plurality of media tracks.

30. The system of claim 24, wherein each decompression path of the plurality of decompression paths comprises a decompression module configured to decompress data and a buffer configured to buffer data.